

**In the Claims**

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Claim 1 (Canceled)

2. (Amended) The method of claim ~~11 or~~ 17, wherein CYP2A6 is selectively inhibited using one or more of the following (i) substances which inhibit CYP2A6 activity; or (ii) substances which inhibit transcription and/or translation of the gene encoding CYP2A6.

Claim 3-16 (Canceled)

Claim 17. (Previously Presented) A method of enhancing inhibition of nicotine metabolism by a CYP2A6 inhibitor in an individual comprising administering to the individual an effective amount of a substance which selectively inhibits CYP2A6, and an effective amount of an inhibitor of CYP2B6.

Claim 18. (Previously Presented) The method defined in claim 17, wherein the substance is at least one compound having a lactone structure with a carbonyl moiety.

Claim 19. (Previously Presented) The method defined in claim 17, wherein the substance is at least one member selected from the group consisting of coumarin, furanocoumarin, methoxsalen, imperatorin, psoralen,  $\alpha$ -naphthoflavone, isopimpinellin,  $\beta$ -naphthoflavone, bergapten, sphondin, coumatetralyl (racumin), (+)-cis-3,5-dimethyl-2-(3-pyridyl)-thiazolidim-4-one, naringenin and related flavones, diethyldithiocarbamate, N-nitrosodialkylamine, nitropyrene, menadione, imidazole antimycotics, miconazole, clotrimazole, pilocarpine, hexamethylphosphoramide, 4-methylnitrosamine-3-pyridyl-1-butanol, aflatoxin B, analogs thereof and derivatives thereof.

Claim 20. (Previously Presented) The method defined in claim 19, wherein the N-nitrosodialkylamine is selected from the group consisting of N-nitrosodiethylamine, N-nitrosodimethylamine and mixtures thereof.

Claim 21. (Amended) A pharmaceutical composition for regulating the metabolism of nicotine to

cotinine comprising an ~~amount~~ effective amount ~~to regulate the metabolism of nicotine to~~  
~~ecotine wherein at least one of a substance which~~ selectively inhibits CYP2A6 and ~~at least one~~  
and an effective amount of an inhibitor of substance inhibits CYP2B6.

Claim 22. (Previously Presented) The composition of claim 21, comprising at least one substance having a lactone structure with a carbonyl moiety.

Claim 23. (Amended) The composition of claim 21, wherein at least one substance is coumarin, furanocoumarin, methoxsalen, imperatorin, psoralen,  $\alpha$ -naphthoflavone, isopimpinellin,  $\beta$ -naphthoflavone, bergapten, sphondin, coumatetralyl (racumin), (+)-cis-3,5-dimethyl-2-(3-pyridyl)-thiazolidim-4-one, naringenin and related flavones, diethyldithiocarbamate, N-nitrosodialkylamine, nitropyrene, menadione, imidazole antimycotics, miconazole, clotrimazole, pilocarpine, hexamethylphosphoramide, 4-methylnitrosamine-3-pyridyl-1-butanol, aflatoxin B, analogs thereof and derivatives thereof, and mixtures thereof.

Claim 24. (Withdrawn) The composition defined in claim 23, wherein the N-nitrosodialkylamine is selected from the group consisting of N-nitrosodiethylamine, N-nitrosodimethylamine and mixtures thereof.

Claim 25. (Previously Presented) A method for treating a condition requiring regulation of nicotine metabolism to cotinine in an individual comprising administering to the individual an effective amount of a substance which selectively inhibits CYP2A6, and an effective amount of an inhibitor of CYP2B6.

Claim 26. (Previously Presented) The method defined in claim 25, wherein the substance is at least one compound having a lactone structure with a carbonyl moiety.

Claim 27. (Amended) The method defined in claim 25, wherein the substance is at least one member selected from the group consisting of coumarin, furanocoumarin, methoxsalen, imperatorin, psoralen,  $\alpha$ -naphthoflavone, isopimpinellin,  $\beta$ -naphthoflavone, bergapten, sphondin, coumatetralyl (racumin), (+)-cis-3,5-dimethyl-2-(3-pyridyl)-thiazolidim-4-one, naringenin and

related flavones, diethyldithiocarbamate, N-nitrosodialkylamine, nitropyrene, menadione, imidazole antimycotics, miconazole, clotrimazole, pilocarpine, hexamethylphosphoramide, 4-methylnitrosamine-3-pyridyl-1-butanol, aflatoxin B, analogs thereof and derivatives thereof, and mixtures there of.

Claim 28 (Previously Presented) The method defined in claim 27, wherein the N-nitrosodialkylamine is selected from the group consisting of N-nitrosodiethylamine, N-nitrosodimethylamine and mixtures thereof.

Claim 29 (Amended) The method defined in any one of claims 26-28, wherein said substance comprises a plurality of compounds ~~comprising administration to the individual of a mixture comprising two or more of said substance.~~

Claim 30 (Amended) A method for treating a condition requiring regulation of nicotine metabolism to cotinine in an individual comprising administering to the individual an effective amount of a substance which selectively inhibits CYP2A6, and an effective amount of an inhibitor of CYP2B6 ~~The method of claim 25,~~ wherein the condition is dependent or non-dependent tobacco use.

Claims 31- 37 (Canceled)

38. (Previously Presented) A method for treating a condition requiring regulation of nicotine metabolism to cotinine in an individual comprising administering to said individual: (a) an effective amount of a first substance which selectively inhibits CYP2A6; and (b) an effective amount of a second substance which is capable of inhibiting the metabolism of the first substance.

39. (Amended) The method of claim 19 ~~claim 11,~~ wherein the substance is methoxsalen or a derivative ~~derivatives~~ thereof.

40. (Amended) The method of claim 27 ~~claim 16,~~ wherein the substance is methoxsalen or a

derivative ~~derivatives~~ thereof.

41. (Amended) The method of claim 38, wherein at least one of said substances is methoxsalen or a derivative ~~derivatives~~ thereof.

Claims 42-44. (Canceled)

Claim 45 (New) The method of claims 17, 21, 25 or 38, wherein the condition requiring regulation of nicotine metabolism to cotinine is selected from the group consisting of opioid related disorders; proliferative diseases; cognitive, neurological, mental disorders, other drug dependencies, malignant disease, psychosis, schizophrenia, Parkinson's disease, anxiety, depression, alcoholism and opiate dependence.

Claim 46. (New) The method of claims 17, 21, 25 or 38, wherein the condition requiring regulation of nicotine metabolism is dependent tobacco use.